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A new species of *Xylaria* from China

Hai-xia Ma[1], Larissa Vasilyeva[2] & Yu Li[1*]

[1]*Institute of Mycology, Jilin Agricultural University, Changchun 130118, China*
[2]*Institute of Biology & Soil Science, Far East Branch of the Russian Academy of Sciences, Vladivostok 690022, Russia*

Correspondence to *: *[1]*yuli966@126.com & [2]*vasilyeva@biosoil.ru*

Abstract—*Xylaria ficicola*, a new species of *Xylaria* (*Xylariales*, *Xylariaceae*), is described from China. It is characterized by its stroma with a tiny subglobose fertile part and a relatively long slender stipe, as well as ascospores with an appendage on each end.

Key words—*Ascomycota*, host-specificity, taxonomy

Introduction

Xylaria Hill ex Schrank is a cosmopolitan genus, widespread throughout tropical, subtropical and temperate regions (Dennis 1956, 1957, 1958; Martin 1970; Rogers 1983, 1984a,b, 1986; Rogers & Callan 1986; Rogers et al. 1988, 1997; Callan & Rogers 1990, 1993; Læssøe 1987, 1992, 1993, 1999; Ju & Hsieh 2007; Ju et al. 2009; Trierveiler-Pereira et al. 2009). Chou (1935) was probably the first Chinese mycologist to report *Xylaria* in China; he described one species from Kweichow, China. Tai (1979) listed 53 taxa of *Xylaria* which were mostly recorded in the southern provinces of China. Abe & Liu (1995) found a species of *Xylaria* in Zhejiang province. The species diversity of *Xylaria* in China is still poorly known and needs further investigations.

A number of *Xylaria* species are host-specific, mainly described on seeds and fruits (Rogers 1979; Rogers et al. 1992, 2002; Læssøe & Lodge 1994; Xu 1999; San Martín et al. 2001). The species recently found on dried fallen leaves and petioles of *Ficus auriculata* in China seems to belong to this group.

Materials & methods

The fungal material was collected in the evergreen forest of Xishuangbanna Tropical Botanic Garden, China. The methods of collecting, preservation, and identification of the specimens follow those of Ju and Rogers (1999).

Taxonomy

Xylaria ficicola H.X. Ma, Lar.N. Vassiljeva & Yu Li, **sp. nov.** Figs 1–5

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Stromata erecta vel prostrata, plerumque solitaria, non ramosa vel interdum ramosa, capitulum conicum vel subglobosum, 1–2.5 mm diam., 1–2 mm crassum plus minusve mollium, intus album, extrinsecus nigrum et aliquanto verrucosum; perithecia prominentia vel inclusa, 0.3–0.5 mm diam.; ostiola leniter papillata vel inconspicua. Stipitis tenuis, glabris, usque ad 6 cm longis. Asci octospori, cylindrici, longe sipitati, 190–220×8–10 µm, partibus sporiferis 110–132 µm, cum annulo apicale in liquore iodato Melzeri cyanescente, urniformi, 5–6.5(–7.5)×3–3.5 µm. Ascosporae brunneae vel fuscae, unicellulares, ellipsoideo-inequilaterales (16–)17.5–21(–22.7) × 6.5–8.5 µm, plerumque sine rima germinativa, cum extremis rotundatis vel late rotundatis, quisque cum apendicula hyalina noncellulare, usque ad globosa.

Type – Haixia Ma, HMJAU 22818 (**holotype**) on dried fallen leaves and petioles of *Ficus auriculata* Lour. (*Moraceae*); Xishuangbanna Tropical Botanical Garden, China, 6.VIII.2010.

Etymology – The species is named after the substrate that the fungus inhabits.

Stromata upright or prostrate, usually solitary, unbranched or sometimes branched, the fertile head conical to subglobose, 1–2.5 mm diam., 1–2 mm thick, texture soft, internally white, externally black and smooth, but sometimes verrucose because of the perithecial mounds; perithecia prominent or embedded, 0.3–0.5 mm diam.; ostioles slightly papillate or inconspicuous. Stipes thin, glabrous, up to 6 cm long. Asci eight-spored, cylindrical, long-stipitate, 190–220 × 8–10 µm, the spore-bearing part 110–132 µm long, with apical ring bluing in Melzer's iodine reagent, hat-shaped, 5–6.5(–7.5) × 3–3.5 µm. Ascospores brown to dark brown, unicellular, ellipsoid-inequilateral, (16–)17.5–21(–22.7) × 6.5–8.5 µm, smooth, usually without an obvious germ slit, with broadly or narrowly rounded ends, each bearing a round hyaline noncellular appendage up to 5 × 5 µm.

Comments — *Xylaria ficicola* is similar to *X. guazumae* F. San Martín & J.D. Rogers (San Martín & Rogers 1989) in stromatal morphology, but the latter grows on the fallen fruits of *Guazuma ulmifolia* Lam. (*Sterculiaceae*) and it has cespitose stromata and relatively smaller ascospores (14–)15–18(–19) × 5.5–6 µm. In addition, the apical ring in asci is different: *Xylaria guazumae* has rectangular apical ring, 2.8–3.2(–3.8) × 2–2.5(–3) µm, but *X. ficicola* has reversed hat-shaped apical ring, 5–6.5(–7.5) × 3–3.5 µm. Furthermore, *X. ficicola* could be separated from *X. guazumae* by the ascospores with inconspicuous germ slits. We did not observe a germ slit on the ascospores, they may be lacking or extremely faint.

Xylaria filiformoidea Hladki & A.I. Romero (Hladki & Romero 2010) from Argentina has similar stromata with subglobose to cylindrical fertile part and long slender stipe, as well as ascospores with appendages, but its ascospores are very small (8–9 × 4–5 µm).

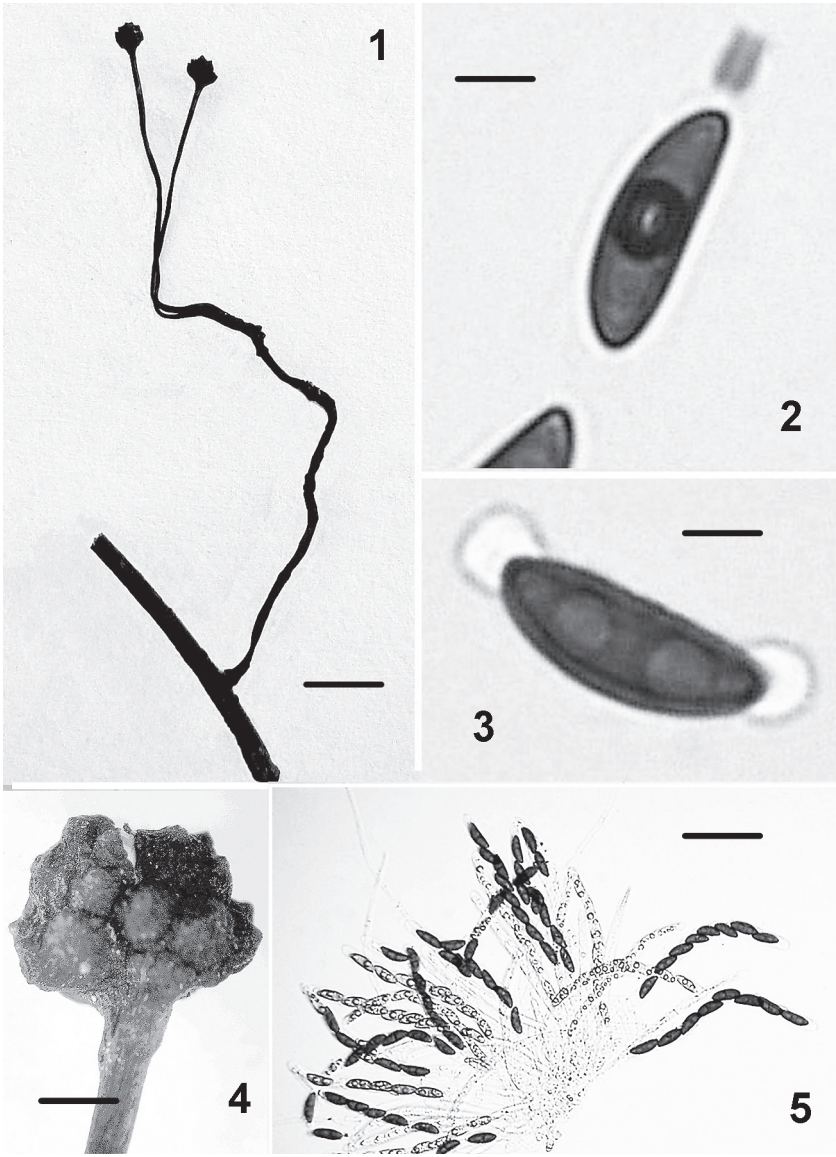

Fig. 1–5. *Xylaria ficicola*.
1: Stromata. 2: Ascal apical ring. 3: Ascospore. 4: Fertile head of a stroma. 5: Asci.
Scale bars: 1 = 6.5 mm, 2 = 6 µm, 3 = 5 µm, 4 = 0.6 mm, 5 = 49 µm

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